

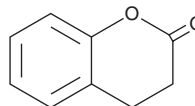
# PRODUCT INFORMATION



## Dihydrocoumarin

Item No. 33495

CAS Registry No.: 119-84-6  
Formal Name: 3,4-dihydro-2H-1-benzopyran-2-one  
Synonym: DHC  
MF: C<sub>9</sub>H<sub>8</sub>O<sub>2</sub>  
FW: 148.2  
Purity: ≥98%  
Supplied as: A liquid  
Storage: -20°C  
Stability: ≥2 years  
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Dihydrocoumarin is supplied as a liquid. A stock solution may be made by dissolving the dihydrocoumarin in the solvent of choice, which should be purged with an inert gas. Dihydrocoumarin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of dihydrocoumarin in these solvents is approximately 30 mg/ml.

### Description

Dihydrocoumarin is a coumarin that has been found in *M. officinalis* and has enzyme inhibitory activity.<sup>1-2</sup> It inhibits the activities of sirtuin 1 (SIRT1) and SIRT2 (IC<sub>50</sub>s = 208 and 295 μM, respectively, for the human enzymes). Unlike coumarin, dietary administration of dihydrocoumarin (0.76%) does not induce hepatocyte vacuolation, bile duct hyperplasia, or cholangiofibrosis.<sup>2</sup> Formulations containing dihydrocoumarin have been used as flavoring agents.

### References

1. Olaharski, A.J., Rine, J., Marshall, B.L., *et al.* The flavoring agent dihydrocoumarin reverses epigenetic silencing and inhibits sirtuin deacetylases. *PLoS Genet.* **1(6)**, e77 (2005).
2. Lake, B.G., Evans, J.G., Lewis, D.F., *et al.* Comparison of the hepatic effects of coumarin, 3,4-dimethylcoumarin, dihydrocoumarin and 6-methylcoumarin in the rat. *Food Chem. Toxicol.* **32(8)**, 743-751 (1994).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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